

Preliminary notes on the Ornithology of Sandur, Karnataka¹

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(With a map)

This paper introduces the avifauna of Sandur taluk (Karnataka State, India) which includes the former princely state of Sandur, demarcated by two main ranges of high forest-covered hills, joining at both ends to enclose a spindle-shaped valley and presenting a geographical feature quite distinct from the adjacent dry Bellary plain more typical of the Deccan plateau. Notes relating chiefly to the status and distribution of 166 species of birds so far recorded from the area are presented together with 16 further species from other parts of Bellary district. The Sirkeer Cuckoo *Taccocua leschenaultii* and Spotted Babbler *Pellorneum ruficeps* are recorded from Karnataka state and the Deccan plateau respectively for the first time. Occurrence of the Indian Lorikeet *Loriculus vernalis*, Great Grey Shrike *Lanius excubitor*, Whiteheaded Babbler *Turdoides affinis*, Whitebrowed Blue Flycatcher *Muscicapa superciliaris* and Greyheaded Flycatcher *Culicicapa ceylonensis* in the tract are other findings of interest. A brief discussion on the composition of Sandur's bird life is included.

INTRODUCTION³

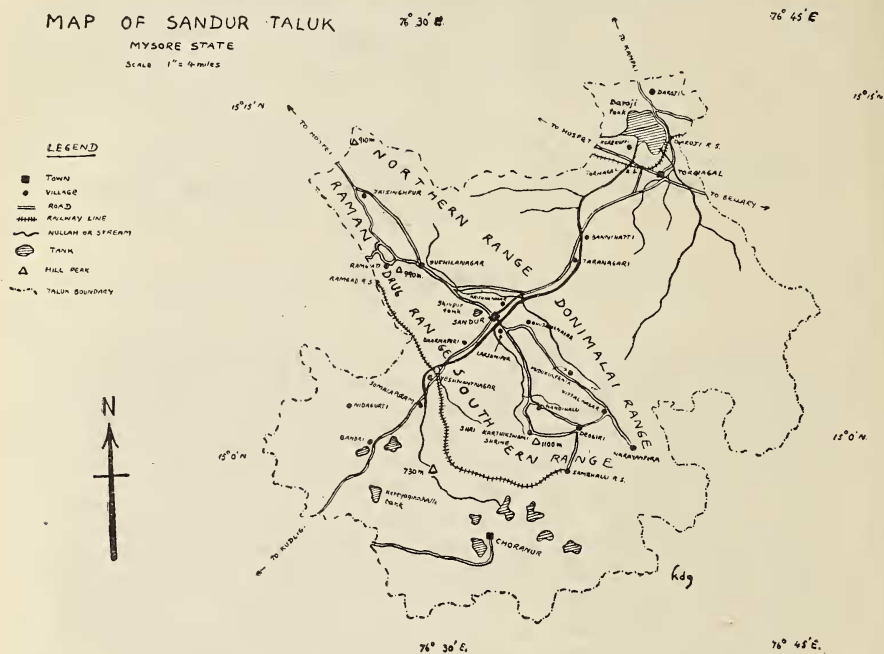
The former princely state of Sandur (14° 58' to 15° 14'N. and 76° 25' to 76°42'E.), now a taluk of Bellary district (Karnataka State, India) consists of two main ranges of high forest-covered hills running NW. to SE. and enclosing an elongate spindle-shaped valley, these together presenting a geographical feature quite different from the surrounding dry Bellary region more typical of the Deccan plateau. The present taluk was formed by the addition, to the former state, of parts of the adjacent plains on both sides of the two hill ranges. Sandur state had an area of approximately 375 sq. km and the present taluk is roughly three times this area.

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³ The details of physiography, vegetation and climate are from Krishnan (1948).

Geologically, the Sandur hills belong to the oldest formations of the earth's crust and are flat-topped with a mean elevation of 900 m above m.s.l., the highest point (1100 m) being above Kumaraswamibetta on the Southern range. The soil is deep red and consists of rock, disintegrated



trap and sandy gravel with outcrops of lime 'kankar' here and there Sandur is well known for its manganese ore which together with iron ore occurs in immense quantities in the hills and is being extensively mined. Jasper, ochres, red oxide, white clay and limestone are also found in plenty and old derelict gold mines exist on the Donimalai range. The valley is dotted with smaller hillocks and trenched with numerous nullahs most of which flow into the Narihalla, a large stream, which cuts through both ranges almost bisecting them in two. The gorges so formed serve as the only accessible entries into the Sandur valley.

The Sandur area receives considerably greater rainfall than the surrounding plains, the average annual precipitation varying from 500 mm to 1140 mm in different years with a mean of about 860 mm. The climate is even and pleasant with high winds in July and August and the hot weather limited to a month or two. The local hill resort of Ramgad (990 m) on the Ramandrug range has an equable temperature and a supply of mineral water from the nearby Thayammankolla. The holy shrine of Shri Karthikswami is located on an undulating hill on the

Southern range and beyond this lies the extensive, flat plateau of Deogiri—noted for its heavy jungles and unlimited mineral wealth. The taluk headquarters, Sandur town (Pop. c. 9,500) is situated at the centre of the fertile valley on the banks of the Narihalla. Smaller townships and larger villages like Bandri, Choranur, Lakshmipur, Krishnanagar, Nandihalli, Sushilanagar and Yeshwantnagar are scattered all over the taluk (*see* map). The railway town of Tornagal is situated near the Daroji tank at the eastern border of the taluk and a broad gauge line linking it to Mudukulpenta within the valley is under preparation. Sandur town is linked by road to Bellary, 48 km to the east; Kudligi, 28 km to the south-west and Hospet, 34 km to the north-west. The nearest railway station at Tornagal is approachable through Hubli, Gadag and Hospet from the west, and Guntakal and Bellary from the east. There is a Traveller's Bungalow at Sandur town and a newly constructed Forest Rest House is located in a beautiful spot overlooking the Narihalla and encompassed by forested hills.

The forest is restricted to the hill ranges, hillocks and foothills, within the valley and is of the open dry deciduous type, bordering on to moist deciduous on the summits of the highest hills. Although there is natural growth of teak, the trees do not attain anything like their greatest size in Sandur. Local timber is not restricted to Teak (*Tectona grandis*)—*Chloroxylon swietenia*, *Anogeissus latifolia*, *Terminalia tomentosa*, *Pterocarpus marsupium*, *Hardwickia binata*, *Soyimida febrifuga*, *Diospyros melanoxylon* and *D. ebenum* also grow well here. Besides these the forest abounds with other species of trees, particularly *Gmelina arborea*, *Azadirachta indica*, *Mangifera indica*, *Adina cordifolia*, *Albizia amara*, *Acacia catechu*, *A. ferruginea*, *Elaeodendron glaucum*, *Bauhinia racemosa*, *Cassia fistula*, *C. auriculata*, *Pongamia glabra*, *Ailanthus excelsa*, *Semecarpus anacardium*, *Emblica* spp., *Terminalia chebula*, *Sapindus trifoliatus*, *Tamarindus indicus* and several species of *Ficus*. The Sandal tree, *Santalum album* grows sporadically throughout the area but is found mainly in the Ramgad, Swamimalai and Thimappa blocks. The undergrowth on the hills and hillocks consists mainly of short tussocky grass, identified as *Cymbopogon martinii* (Rosa grass), *C. coloratus*, *Heteropogon contortus* and *Sehina nervosum*. Bamboo, chiefly *Bambusa arundinacea* and *Dendrocalamus strictus*, grows in dense clumps particularly on the southern hills. The exotic lantana, introduced into Sandur for ornamental purposes (Ramachandra Rao 1920) has spread considerably all over the hills and in the valley.

The valley is more open and cultivated every bit of fairly level land being converted into fields. Only the hillocks and foothills with forest cover have not been touched but signs of even these being brought under cultivation are evident. The main crops grown here are jowar (the staple food), bajra and groundnut with a fair acreage

being put under other grain, pulse, oilseed, fibre and cash crops. Mango orchards abound and the tamarind flanks the roads, paths and streams.

The outer plains on the Bellary side are more open and dry with the hillocks gradually showing a poorer tree growth as one goes away from Sandur until near the edge of the taluk they take up the rocky character typical of the bouldery Bellary hills covered only with a sparse growth of xerophytic vegetation. The only reasonable tree growth here is along the Narihalla which emerges through the Sandur hills and flows eastward towards its ultimate destination—the Daroji tank. On the Kudligi (western) side, the Sandur plains within the taluk limits are more forested, the open jungle on the foothills of the western ranges spreading westward and covering most of the lower hills and hillocks with a shortish, scrub forest. One of these hills, Jarimalaibetta, rises to 730 m above m.s.l. and is the source of the Narihalla. A distinctive feature of this western plain is the number of small lakes and tanks scattered all over the area.

The mammalian fauna of Sandur is rich but steadily decreasing, owing to much poaching and 'shikar'. Leopard, wild boar, sambar, four-horned antelope, the grey langur, jungle cat, the small Indian civet, common mongoose, jackal, the Indian fox, the Indian porcupine, pangolin, the blacknaped hare, several small rodents, bats and other small animals occur, mostly in forest on the hills. The Indian gazelle (Chinkara) and the sloth bear are sometimes seen on the adjacent plains while stray and miserably depleted herds of blackbuck roam the black-cotton soils outside the taluk near Bellary and Hospet. The tiger once wandered into the forested hills but has been completely shot out and only rare unconfirmed reports of tiger crossing into the hills are obtained at present. The monitor lizard, *Varanus bengalensis* and the pond tortoise, *Geomyda trijuga* are common. Other forms of life including snakes, lizards, frogs, freshwater fish, earthworms and other annelids, molluscs, millipedes and other arthropods including scorpions, crabs, spiders and a great variety of insects and mites are abundantly evident here and could offer interesting material for study. The plant wealth of the Sandur hills is certainly undocumented and here is an absorbing field of investigation for the interested botanist, both pure and economic, the latter finding much of value for there is undoubtedly an abundance of medicinal plants, herbs and roots here.

Regarding the bird life of Sandur, Krishnan (1948) writes—'The avifauna of the State is exceptionally rich and provides the student of bird-life with interesting local variations. Several migratory birds seem to linger within the seclusion of these hills longer than at other places.' The only other references to Sandur's ornithology are by Krishnan (1955) on the Rosy Pastor, by Whistler (*in* Ali 1942) on the Yellow-throated Bulbul and by Campbell (1906) on the Whitebellied Drongo;

There is no published account of the Ornithology of Sandur and this paper makes an introductory attempt to supply the deficiency.

There are other reasons which have prompted me to offer these preliminary notes on the avifauna of Sandur. The Deccan plateau as a whole and the northern portion of Karnataka east of the Western Ghats have been largely neglected by ornithologists as substantiated by the following statements :

‘There is a huge area in the centre of the Peninsula between the Central Provinces and the southern boundary of Karnataka which is virtually unknown and over which we have found no indication of the distribution of the most common species.’ (Whistler & Kinnear 1932a).

‘This bulbul . . . is apparently much overlooked because of its skulking habits and the fact that the region it inhabits has not received much attention from ornithologists.’ (Whistler *in* Ali 1942).

This being largely true even today, it was thought to be a matter of some urgency to publish my notes, however sketchy, on the birds of this interesting but neglected area if only to put on record the status and distribution of the birds occurring here. In addition, as the Sandur hills constitute a peculiar feature of the Deccan, presenting a habitat very different from neighbouring arid areas, the writing of these notes is further justified. A third point of importance is that the recent acceleration in the development and expansion of the mineral industry in the area, the building of a dam across the Narihalla to enable extensive irrigation facilities to be available to farmers in the taluk, the felling of forests to bring more land under cultivation, the opening up of the tract by modern means of transport and the subsequent increase in population with its resultant side effects, all threaten to change the entire character of this rich area, from a calm and secluded valley to a bustling, industrial complex. It was felt therefore, that an idea of the composition of the avifauna of Sandur that existed here before the terrain was extensively and intensively exploited was essential to appreciate these changes some years hence.

This is an initial attempt to put on record the as yet unaffected bird life of Sandur, as has best been possible through several short trips by the author to the area over the last ten years.

ACCOUNT OF SPECIES

The list that follows is placed in the order of Ripley (1961) and the nomenclature followed is from the same work and the published volumes of the INDIAN HANDBOOK (Ali & Ripley 1968-1972). Subspecies are not discussed (with a few exceptions), although several specimens were collected, as I considered these unimportant as a rule, complicating matters unnecessarily and tending to diminish unjustifiably the real

significance of the species category. Species personally seen and identified without doubt and those recorded from Sandur limits by other workers are not bracketed. Birds reported to occur in other taluks of Bellary district are placed in square brackets and are expected to be of some value. The terms *valley*, *hills* and *plains* should be self-explanatory from the introductory notes.

Podiceps ruficollis (Pallas) : Little Grebe

A rather sparse resident, some individuals staying throughout the year on tanks with water. One or two pairs are invariably found on the tank at Shivpur where they often breed.

Phalacrocorax carbo (Linnaeus) : Large Cormorant

Krishnan⁴ has seen this cormorant on the tank at Bandri. A solitary bird was seen by the author on the tank near Chilkanhatti (Hospet taluk, Bellary district) in February 1968. Krishnan noted it on a large tank at Bellary.

Phalacrocorax fuscicollis Stephens : Indian Shag

One unconfirmed record from the tank at Bandri by Krishnan who also reports seeing one at a tank near Bellary town.

Ardeola grayii (Sykes) : Pond Heron

Fairly common resident, locally distributed along the Narihalla and its larger tributaries and around the tanks within and outside the valley. Neginhal (1971) saw these on the water's edge on an island in the Tungabhadra river near Shingtalur (Mundargi taluk, Dharwar district), just across the northern border of Bellary district.

Bubulcus ibis (Linnaeus) : Cattle Egret

Seen only twice attending herds of grazing cattle in the valley in small numbers. It is probably more common in the adjacent plains but my limited work on the bird life of these plains prevents any definite conclusions here. Five normal and two black [melanistic?] individuals of this species were seen on the Tungabhadra near Shingtalur in February (Neginhal 1971).

Ciconia episcopus (Boddaert) : Whitenecked Stork

Recorded from Daroji tank by Krishnan. Neginhal (1971) reports seeing this stork on the Tungabhadra reservoir. This large stork is quite common in northern Karnataka east of the Western Ghats and some individuals are invariably found frequenting most of the tanks with water.

⁴ References to Krishnan not accompanied by citation of year indicate data communicated by him personally to the author.

Threskiornis melanocephala (Latham) : White Ibis

Krishnan saw these at the Daroji tank and Neginhal (1971) noted them on the Tungabhadra reservoir.

Platalea leucorodia Linnaeus : Spoonbill

I have never seen this bird in Sandur but Krishnan reports seeing it at the Daroji tank.

[The Blacknecked Stork *Xenorhynchus asiaticus* (Latham), Black Ibis *Pseudibis papillosa* (Temminck), Flamingo *Phoenicopterus roseus* Pallas and Ruddy Sheld-duck *Tadorna ferruginea* (Pallas) were recorded from the Tungabhadra reservoir by Neginhal (1971).

One specimen of the Barheaded Goose *Anser indicus* (Latham) was taken at Tungabhadra (Abdulali 1968) and Neginhal (1971) saw them 'resting on sandbanks, in low water, in the middle of the (Tungabhadra) river near an islet.']

Anas acuta Linnaeus : Pintail

Recorded from the tanks at Kereyaginahalli (Sandur taluk, western plain) and Shivpur by A.M.G.⁵, but I have no knowledge of it in Sandur. Seen on the Tungabhadra river near the reservoir (Neginhal 1971).

Anas crecca Linnaeus : Teal

Krishnan and A.M.G. report having seen this duck on the tanks at Kereyaginahalli and Shivpur. Noted on the Tungabhadra river near Shingtalur (Neginhal 1971).

Anas poecilorhyncha J. R. Forster : Spotbill

A.M.G. has seen this large duck on the tank at Kereyaginahalli. Noted about ten individuals of this resident duck on the tank near Chilkanhatti in February 1968.

Anas penelope Linnaeus : Wigeon

A couple of these birds were seen and shot on Shivpur tank on December 3, 1971, and were identified as this species. Also reported from Kereyaginahalli tank by A.M.G. in winter.

Anas querquedula Linnaeus : Garganey

A.M.G. records this common wintering duck from Kereyaginahalli tank. Observed on the Tungabhadra river near Shingtalur (Neginhal 1971).

⁵ Ajai M. Ghorpade, a resident birdwatcher of Sandur, has kindly supplemented the author's observations with his own experiences of Sandur's birds.

Anas clypeata Linnaeus : Shoveller

A solitary bird was seen and shot along with the two wigeon on December 3, 1971, at Shivpur tank. A.M.G. has seen it at the tank near Kereyaginahalli in winter.

Aythya ferina (Linnaeus) : Redheaded Pochard

Recorded by A.M.G. from the tanks at Kereyaginahalli and Shivpur in winter. I have no record of this species from Sandur although it must surely be one of the more abundant wintering ducks in the area. I saw about fifteen pochard in February 1968 on the Chilkanhatti tank.

[Baker (1900) quotes Hume who states that the Tufted Duck *Aythya fuligula* (Linnaeus) has been shot near Bellary and that though certainly rare there it visits Mysore. Ali and Ripley (1968) comment in the INDIAN HANDBOOK—'Decreasingly in the Deccan and farther south to Mysore (rare).' In November 1971 a female of this species was secured from a tank in Yelburga taluk (Raichur district) and in November 1972 a male was shot on the same tank. Though rare, this pretty pochard seems to visit reedy tanks in Karnataka regularly in small numbers in winter.]

Nettapus coromandelianus (Gmelin) : Cotton Teal

I have only seen this duck twice in Sandur, on both occasions at the tank near Bandri. A party of seven was present in April 1963 and twenty teals were noted in November the same year. It is also reported from the tanks at Kereyaginahalli and Shivpur by A.M.G.

Elanus caeruleus (Desfontaines) : Blackwinged Kite

One record only, of a single bird flying over cultivation near Shivpur tank on June 19, 1970. Krishnan mentions seeing it occasionally near Sushilanagar and Lakshmipur in the valley.

Milvus migrans (Boddaert) : Pariah Kite

A fairly common resident in Sandur though not in very great numbers. During the last week of December (1965) which is the breeding season of this kite in south India, I observed several pairs at Sandur and along the route from Bangalore to Sandur engaged in what I believe is the courtship behaviour of this raptor. It consisted of the pair, soaring fairly high up in the air, indulging in aerobatics in which one bird (the male?) would ascend a little higher and then 'dive-bomb' the lower bird in a spiralling stoop causing the latter to take 'evasive action'. Such behaviour was observable all through the day during the breeding season, when it seems to be more frequently practiced than during other months of the year. Ali and Ripley (1968) mention this type of mannerism for this kite but do not associate it particularly with its courtship behaviour.

Haliastur indus (Boddaert) : Brahminy Kite

Krishnan states that though not common, this kite definitely occurs within the valley soon after the rains when he has watched them fishing for tadpoles at inundated flats at such times. Reported as observed near the Kereyaginahalli tank by A.M.G. I have not seen it within the taluk but noted one bird soaring above a nullah in the outskirts of Kudligi in August 1972.

Accipiter badius (Gmelin) : Shikra

A breeding resident throughout the Sandur area and fairly common. Once seen swooping down on a jungle babbler sitting in a sparsely foliated bush on the bank of a nullah near Yeshwantnagar. Couples are often observed soaring high over cultivation in large circles. In June 1970, two immature shikras were seen harassing a group of yellow-wattled lapwings in the valley. The lapwings took to wing and retaliated fiercely by diving at the hawks, all the time keeping up their screaming calls.

Butastur teesa (Franklin) : White-eyed Buzzard-Eagle

This common raptor of the Indian plains seems widely but thinly distributed all over the taluk, including the hills. I have found the white throat patch with the dark central stripe through it a most reliable guide, when visible, to its identification in the field.

Hieraaetus pennatus (Gmelin) : Booted Hawk-Eagle

One record only, of a single bird seen perched on the stump of a dead tree beside a nullah in the valley in December 1965. When approached it took to wing and soared about in circles, slowly ascending. In flight, a small white patch on each side at the base of the neck near the wing base is a good identification mark in the field, when visible clearly.

Aquila rapax (Temminck) : Tawny Eagle

According to Krishnan, this eagle, common in the Guntakal downs (Andhra Pradesh), strays into Sandur occasionally.

[Several other large and medium-sized hawks and eagles have been observed on many occasions in Sandur by the author, but owing to the difficulty in identifying without doubt this confusing complex of birds in the field more details are not available here.]

Torgos calvus (Scopoli) : Black King Vulture

A single record, from Yeshwantnagar, of a solitary individual sitting atop a huge neem tree in the company of some whitebacked vultures. There have been several reports of late that this vulture is becoming very scarce, especially in the south. My observations in recent years fully

endorse this point of view. In the last five years, I have only some three to four sightings on record. It may not be out of place here to mention that one king vulture was seen along with whitebacked and white scavenger vultures sunning themselves on a dusty path in the Bandipur Sanctuary (Mysore district) in June 1970. I feel the cause for the decline of this huge vulture in recent years needs to be studied.

Gyps bengalensis (Gmelin) : Indian Whitebacked Vulture

The most familiar vulture in Sandur, most often seen soaring high in the air with effortless ease.

Neophron percnopterus (Linnaeus) : White Scavenger Vulture

Another fairly common vulture in Sandur, often teaming up with whitebacked vultures at a carcass or in the air.

Circus spp. : Harriers

This is another group which presents problems in the correct identification of its members, especially of females and immatures. Harriers, however, are not very common in Sandur and I have only a couple of records of unidentified females flying low over fields in the valley in characteristic fashion.

Circus gallicus (Gmelin) : Short-toed Eagle

Krishnan informs me that this eagle occurs, though rarely, in Sandur and recollects how he once freed one of his racing pigeons from the clutches of this eagle in Sandur.

[The Osprey *Pandion haliaetus* (Linnaeus) was seen flying high above the Tungabhadra river near a place called Anaigudi near Hampi (Hospet taluk, Bellary district) on February 6, 1968. It was in bad plumage and looked to be in moult.]

Falco biarmicus jugger J. E. Gray : Laggar Falcon

I have a single sight record of the Laggar *Falco biarmicus jugger* J. E. Gray, when a single bird was seen perched on a tree on the banks of a nullah in the valley on December 26, 1965. The thin dark cheek-stripe diagnostic of the above race was clearly noticeable. Krishnan has also seen it in Sandur.

Falco peregrinus Tunstall : Peregrine Falcon

While watching the Booted Hawk-Eagle in the valley in December 1965, this falcon was also seen soaring in the air in large circles. It then only slightly drew in its wings and just shot out of sight heading towards the crags on the eastern hills. The speed which this renowned falcon can achieve is truly fantastic and has to be seen to be appreciated. Several inaccessible, almost vertical craggy spots on the Sandur hills can offer

excellent breeding places for this falcon (resident breeding race : *Falco peregrinus peregrinator* Sundevall) and more careful observation could well reveal nests of the Shaheen within Sandur. Krishnan has also observed the Shaheen Falcon in Sandur.

Falco tinnunculus Linnaeus : Kestrel

A fairly common winter migrant to the Sandur valley, seen soaring or hovering characteristically over cultivation or thin jungle.

Francolinus pictus (Jardine & Selby) : Painted Partridge

Rare, only observed in thin scrub adjacent to cultivation near Yeshwantnagar on the western plain outside the hills. Krishnan mentions seeing it on Kumaraswamibetta and says it perches on tops of trees to call. Neginhal (1971) saw these near the rest house at Shingtalur.

Francolinus pondicerianus (Gmelin) : Grey Partridge

Common in the valley and plains, but not noted at any elevation on the hills. The long grass flanking the numerous nullahs provide very good cover for this partridge. Seen near the rest house at Shingtalur (Neginhal 1971).

Coturnix coturnix (Linnaeus) : Grey Quail

One record of a party of four of these migrant quails seen scuttling off into long grass bordering a road on one of the hillocks in the valley, in winter. Neginhal (1971) reports having seen them near the rest house at Shingtalur in February.

Coturnix coromandelica (Gmelin) : Blackbreasted Rain Quail

Not very common in Sandur, seen only near Yeshwantnagar on the western plains. Coveys are often seen searching for food among manure heaps dumped in fields, especially soon after a shower.

Perdicula asiatica (Latham) : Jungle Bush Quail

This is by far the most abundant and widely distributed quail in Sandur, occurring on the plains, in the valley and on the hills. The sight of these quails trooping down to their roosting place almost punctually every evening in single file is most heart-warming. Altogether an extremely interesting bird to observe and study. *Perdicula asiatica vellorei* was described as new by Abdulali & Reuben (1964) from specimens collected at Vijayanagar (Hampi, Bellary district) and several other localities. However, the subspecies is not mentioned in the INDIAN HANDBOOK (Ali & Ripley 1969). Abdulali (1969) placed two examples taken at Vijayanagar with this species but was uncertain of its subspecific identity.

[Two examples of the Rock Bush Quail *Perdicula argoondah* (Sykes) collected at Vijayanagar by G. C. Shortridge were placed with the race

P. a. salimalii Whistler (Abdulali 1969, 1971) and are in the collection of the Bombay Natural History Society. This race is separated on the basis of its bright brick-red upper plumage and is supposed to be confined to Chitradurga (Chitaldrug) district in east-central Karnataka the specimens from Vijayanagar extending its range a little further north.]

Galloperdix lunulata (Valenciennes) : Painted Spurfowl

One of the commonest game birds in the forested parts of the valley and the hills. It often sought refuge in trees while I was pursuing it and I have come across birds roosting in short trees well after dusk. This spurfowl is addicted to gleaning spilt grain on the dusty hill roads, usually in the evenings.

Gallus sonneratii Temminck : Grey Junglefowl

Uncommon and sporadic, only occasionally seen on the hills where it seems to be restricted to the open forest ; no records from the valley or the plains.

Pavo cristatus Linnaeus : Indian Peafowl

This stately bird was once very common in Sandur some years ago especially as it was protected in the erstwhile princely state. Now one can see it only near the shrine of Shri Karthikswami on the Deogiri range with any amount of frequency. It is subjected to much poaching and persecution, being hunted for its excellent flesh and for the wonderful 'tail' feathers. The peafowl also gleans spilt grain from dusty hill roads in the evenings. Neginhal (1971) reported seeing peafowl commonly in herds on an island in the Tungabhadra near Shingtalur in February.

Turnix sylvatica (Desfontaines) : Little Bustard-Quail

In February 1968, several birds were flushed, singly, on three separate occasions, from the dense tangle of vegetation on the nullah banks littered with fallen leaves, in the valley. One of these was shot and identified as this species.

[Four examples of the Indian Bustard-Quail *Turnix suscitator* (Gmelin) were taken at Vijayanagar in July and are in the Bombay Natural History Society's bird collection (Abdulali 1969).]

Amaurornis akool (Sykes) : Brown Crake

A single record, of a solitary bird hunting for food on the edges of a nullah flanked by thick bushes, in the valley a little before sunset. I watched this crake for quite some time retreating into the interior of the bushes at the slightest alarm, only to reappear stealthily a little further up the water-filled streamlet, all the time jerking its stubby tail.

Amaurornis phoenicurus (Pennant) : Whitebreasted Waterhen

Fairly common around the tanks and the many nullahs which fill up after the rains in the valley and plains.

Gallinula chloropus (Linnaeus) : Indian Moorhen

Krishnan saw this moorhen frequenting discontinuous pools of water along the Narihalla near Taranagari. It was recorded on the Tungabhadra river near the reservoir (Neginhal 1971).

Fulica atra Linnaeus : Coot

Reported from the tank at Kereyaginahalli by A.M.G. but not seen in Sandur by me.

Vanellus indicus (Boddaert) : Redwattled Lapwing

This plover is not uncommon in Sandur, keeping near tanks and nullahs with some amount of water. Also a crepuscular and nocturnal bird, its unmistakable 'did, did-he-do-it?' is a familiar sound in the night.

Vanellus malabaricus (Boddaert) : Yellow-wattled Lapwing

Frequently seen in the valley and plains in open dry country, only coming to water to quench its thirst. A much quieter bird than the Redwattled Lapwing but equally as attractive. See also under Shikra.

Charadrius dubius Scopoli : Little Ringed Plover

These little plovers were seen in small numbers on the Shivpur tank during December 1966. Probably visits other tanks in Sandur regularly each winter.

Tringa nebularia (Gunnerus) : Greenshank

One record only of a single bird at Shivpur tank on December 3, 1971. May winter on other tanks in Sandur in limited numbers. I saw two greenshanks at the tank near Chilkanhatti in February 1968.

Tringa ochropus Linnaeus : Green Sandpiper

Least numerous of the three sandpipers seen by the author in Sandur. Found singly or in small groups around small pools and water-filled depressions away from the main tank. Winter visitor in very small numbers.

Tringa glareola Linnaeus : Spotted Sandpiper

The most abundant sandpiper in Sandur in winter distributing itself on nearly all the tanks in the plains and valley. Its eye catching spotted upperparts, long dainty legs and exquisite slender form make it a delight to watch as it trips over the muddy edges of tanks in search of food. In

character it is exactly opposite to the Green Sandpiper, preferring company and being easily approachable. Four of these waders were noted in February 1968 at the Chilkanhatti tank by me. Neginhal (1971) saw them on the banks of the Tungabhadra near Shingtalur in February.

***Tringa hypoleucos* Linnaeus : Common Sandpiper**

A rather common wintering sandpiper to the tanks in Sandur, and one of the earliest migrants to arrive here. Extremely tame and confiding and also prone to a solitary habit. Seen on the Tungabhadra river bank near Shingtalur in February (Neginhal 1971).

***Capella* spp. : Snipe**

Another group which presents problems in correct identification in the field. I have flushed several solitary birds from the wet grassy margins of Shivpur tank in winter but have not been able to identify them down to species with certainty.

***Himantopus himantopus* (Linnaeus) : Blackwinged Stilt**

A regular and fairly common winter visitor to the tanks in Sandur. A party of 10-15 birds is invariably present during the winter months at Shivpur tank. Four stilts were seen by the author at Chilkanhatti tank in February 1968 and Neginhal (1971) saw them on the banks of the Tungabhadra near Shingtalur.

***Burhinus oedicnemus* (Linnaeus) : Stone Curlew**

Shy and secretive ; apparently rare in Sandur, having been recorded only once in the valley by the author. Krishnan states it is not uncommon in the valley and he has often heard it calling at night over Sandur town. Two examples, assigned to the subspecies *B. o. indicus* (Salvadori), present in the collection of the Bombay Natural History Society (Abdulali 1970), were collected from Bellary.

[Neginhal (1971) saw the Whiskered Tern *Chlidonias hybrida* (Pallas) flying to and fro over a stretch of the Tungabhadra near Shingtalur in February. I saw a Blackbellied Tern *Sterna acuticauda* J. E. Gray also on the Tungabhadra near Anaigudi in February 1968.]

***Pterocles exustus* Temminck : Indian Sandgrouse**

According to A.M.G. this sandgrouse occurs in Sandur, but I have never seen it here. However it should be fairly common in the dry open areas of the taluk.

***Pterocles indicus* (Gmelin) : Painted Sandgrouse**

I have only one record of a pair seen in the dry mid-eastern part of the Sandur valley. Four examples of the typical race *P. i. indicus* (Gmelin)

obtained from Vijayanagar and deposited in the collection of the Bombay Natural History Society include two females with strongly rufous upper-parts and wing coverts and are held to be strikingly different (Abdulali 1971).

Treron phoenicoptera (Latham) : Yellowlegged Green Pigeon

Affects trees in fruit (especially of the genus *Ficus*) throughout the year in the valley and on the hills in groups of 10-20 or more. This attractive pigeon is easily identified on account of its *yellow* legs, unlike those of any other green pigeon in India.

Columba livia Gmelin : Blue Rock Pigeon

A common resident in Sandur affecting rocky areas on the hills, on buildings, in wells, and the like. A large breeding colony exists on the gorge formed by the Narihalla cutting through the western range of hills.

Streptopelia decaocto (Frivaldszky) : Indian Ring Dove

An abundant resident, more common in the drier country in the plains and valley. Neginhal (1971) saw this dove on one of the islands in the Tungabhadra near Shingtalur.

Streptopelia tranquebarica (Hermann) : Red Turtle-Dove

This small dove is fairly common in the valley especially in winter when its numbers are probably augmented by influx of outside populations. Affects the tree-lined nullahs in the valley and flies out to adjacent fields to feed. The females are apt to be mistaken for those of the Ring Dove. This is the least common of the four doves within the valley.

Streptopelia chinensis (Scopoli) : Spotted Dove

Extremely abundant wherever cultivation and groves of trees are present together with a water source nearby. The shady tree-lined nullahs in the valley and outside it attract teeming numbers of this dove, partial to moister facies, hence dominating the valley as far as the doves are concerned. Also occurs in good numbers on the hills.

Streptopelia senegalensis (Linnaeus) : Little Brown Dove

I think this is the commonest dove in the taluk as a whole, but is more abundant in the drier open country in the plains where it somewhat appreciably replaces the preceding species. Also occurs in fair numbers in the valley and on the hills. Comparatively easier to approach and less shy than other doves, it is common on trees around habitation. I have also seen it in large numbers around Hospet and Bellary. Neginhal (1971) observed them on an island in the Tungabhadra near Shingtalur.

Psittacula eupatria (Linnaeus) : Alexandrine Parakeet

Krishnan says a large parakeet, possibly this species, occurs in Sandur. I have not seen it here.

Psittacula krameri (Scopoli) : Roseringed Parakeet

Common and well distributed all over the extensively cultivated valley and a menace to agriculture. An extremely destructive bird, it feeds on several grain and fruit crops. I have seen parakeets cut off whole ears of jowar and bajra, fly on to adjacent trees to pick off a part of the grains, discard the rest of the earhead and go back to the standing crop to cut off yet another! Two parakeets were observed eating flowers and buds of a silk-cotton tree (*Bombax ceiba*) in the valley in February 1968. An especial item of food here is the green fruit of the neem tree (*Azadirachta indica*). Neginhal (1971) saw these birds near the rest house at Shingtalur.

Psittacula cyanocephala (Linnaeus) : Blossomheaded Parakeet

Almost as common as the preceding species in the valley and equally as destructive to grain and fruit. The proximity of forest to cultivated areas in Sandur being very amenable to this beautiful parakeet, it is found in much larger numbers here than elsewhere in the Deccan.

Loriculus vernalis (Sparman) : Indian Lorikeet

Though I have no knowledge of this little psittacine in Sandur, Krishnan tells me that he has definitely observed lorikeets in Sandur. From the account of this species in the INDIAN HANDBOOK (Ali & Ripley 1969), it appears that this lorikeet is not found outside the coastal strip and ghats in the west and the ghats in the east, in the southern peninsula. In this light, the record by Krishnan from Sandur is very interesting and it only remains to confirm its occurrence and to establish whether it is resident here or just a local migrant.

Clamator jacobinus (Boddaert) : Pied Crested Cuckoo

I have but a single record, of two birds seen in bushes flanking a nullah at the base of the hills near Yeshwantnagar on 30 May 1964. Whistler (1928) discusses the status of this species in the region.

Cuculus varius Vahl : Lesser Hawk-Cuckoo

Fairly common in the valley, the birds keeping well inside densely foliaged trees, hence difficult to observe. Their unmistakable calls are a familiar sound during the rains.

Eudynamys scolopacea (Linnaeus) : Koel

A familiar and well distributed resident throughout the better wooded areas of the taluk, particularly in the valley and on the hills. Its mono-

tonous 'ku-oo, ku-oo . . . ' on an ascending scale during the hottest months, though pleasant to the ear in the early mornings, becomes almost unbearable in the afternoons. Krishnan comments that he found it not very common in Sandur.

Taccocua leschenaultii Lesson : Sirkeer Cuckoo

Not uncommon on the grassy scrub-and-bush covered foothills in the valley as well as on the hills. A ground frequenting sombre-coloured cuckoo with a striking red bill. Ali and Ripley (1969) do not specify Karnataka as being within the range of this bird in the INDIAN HANDBOOK although it is recorded by them from all other states in the south. This observation therefore is probably the first authentic report of the Sirkeer Cuckoo from Karnataka⁶.

Rhopodytes viridirostris (Jerdon) : Bluefaced Malkoha

Though I have not observed this cuckoo in Sandur, Krishnan states he has positively seen it in bushes along the Narihalla. This species is usually called the Small Greenbilled Malkoha, but I adopt Bluefaced Malkoha in concordance with Henry (1955) to prevent confusion with the (Larger) Greenbilled Malkoha *Rhopodytes tristis* (Lesson).

Centropus sinensis (Stephens) : Large Crow-Pheasant

Another common resident of the well wooded areas in Sandur. Favours the vicinity of dark mango groves and the like. Neginhal (1971) saw it near the rest house at Shingtalur.

Otus scops (Linnaeus) : Little Scops Owl

According to Krishnan this tiny owl occurs in Sandur. I have not seen it here.

Otus bakkamoena (Pennant) : Collared Scops Owl

Observed in Sandur by Krishnan but not recorded by me in the taluk.

Bubo bubo (Linnaeus) : Great Horned Owl

Two individuals of this large owl were heard and seen at midnight by Krishnan near the Narasimhaswami gorge (where the Narihalla cuts through the western ranges of hills).

Bubo zeylonensis (Gmelin) : Brown Fish Owl

One was seen by Krishnan near the Narasimhaswami gorge and I have also recorded one near a tank in the western plains, in the night.

⁶ SALIM ALI (1943 : The Birds of Mysore. *J. Bombay nat. Hist. Soc.* 44 : 10), has a sight record of a pair in heavy thorn scrub in a ravine at Satnur.—EDS.

Glaucidium radiatum (Tickell) : Jungle Owlet

I have no knowledge of this owlet in Sandur but am told by Krishnan that it occurs here.

Athene brama (Temminck) : Spotted Owlet

This delightful little owlet is common and widely distributed throughout the taluk. During the day pairs may be seen resting in shady trees along the nullahs or in mango orchards. Frequently seen in and around habitation.

[I seem to have rather overlooked members of the owl family in Sandur though several owls were occasionally 'caught' in the headlights while driving in the night through jungle. Such fleeting glimpses unfortunately could not result in their identity being legitimately established.]

Caprimulgus asiaticus Latham : Little Nightjar

The only nightjar seen or heard by the author in Sandur. Common and widely distributed all over the taluk, its distinctive call a familiar sound in the night. Prone to sit amongst littered leaves on the stony nullah beds during the day where they are remarkably obliterative. Several are bound to be put up in the course of an extended 'nullah-bed excursion'.

Apus affinis (J. E. Gray) : House Swift

Large numbers of these small swifts are commonly seen hawking insects in the air above the towns and villages. Nests in colonies under eaves of large buildings. Krishnan found this swift especially common around Krishnanagar.

Cypsiurus parvus (Lichtenstein) : Palm Swift

A few of these slender brown swifts were seen hawking insects in the air above the Palace and the adjacent Shivpur tank. Some six palm swifts were observed flying about near the Tungabhadra at Anaigudi in February 1968. They were also noticed to shoot up into the folds of a dried-up hanging palmyra leaf and come out almost immediately (building?).

Hemiprocne longipennis (Rafinesque) : Crested Tree Swift

Seen along with the palm swifts flying gracefully in the air above the Palace and the Shivpur tank.

[One Lesser Pied Kingfisher *Ceryle rudis* (Linnaeus) was seen by the author on the Tungabhadra near Anaigudi in February 1968.]

Alcedo atthis (Linnaeus) : Small Blue Kingfisher

Said to occur about some nullahs by A.M.G. ; never seen in Sandur by me. Seen on the banks of the Tungabhadra by Neginhal (1971).

Halcyon smyrnensis (Linnaeus) : Whitebreasted Kingfisher

Common and resident in Sandur in all locations preferably near water. In flight its brilliant blue wings outshine even those of the Indian Roller.

Merops philippinus Linnaeus : Bluetailed Bee-eater

A regular winter visitor in small numbers to the Sandur valley where it is seen unfailingly near Shivpur tank. Here it perches on the topmost branches of the large tamarind trees overlooking the tank and launches aerial sallies after winged insects, notably large Anisopteran dragonflies.

Merops orientalis Latham : Small Green Bee-eater

An extremely common resident within and outside the valley and on the hills. Uses varying types of perches in open country, from treetops and electric wires to clods of earth from where it darts after flying insects. Neginhal (1971) saw a group of these bee-eaters on the banks of the Tungabhadra.

Coracias benghalensis (Linnaeus) : Indian Roller

Another very common bird of cultivation and open country, invariably seen perched on electric wires. Together with the Green Bee-eater and black drongos dominates the avian scene in such situations. Neginhal (1971) saw it near the rest house at Shingtalur in February.

Upupa epops Linnaeus : Hoopoe

A remarkable bird, resident and fairly common all over the taluk. Frequents open cultivation where it may be seen looking for food on the ground in its characteristic fashion. Nests in holes in walls of buildings. Recorded near the rest house at Shingtalur (Neginhal 1971).

Tockus birostris (Scopoli) : Grey Hornbill

Inhabits the better forested parts of the taluk, venturing into mango orchards in fruit to feed. Also affects fig trees laden with fruit along with a multitude of other frugivorous birds. Its slow, almost reptilian movements in fully foliated trees often go unnoticed but the shrill kite-like squeal never fails to locate it.

Megalaima zeylanica (Gmelin) : Large Green Barbet

Curiously uncommon, seen only in the hills with any regularity. One bird was noted along with yellowlegged green pigeons feeding on ripe figs on the Ramandrug range.

Megalaima haemacephala (P. L. S. Müller) : Crimsonbreasted Barbet

The 'Coppersmith' is resident and very common in Sandur in lightly wooded areas and on large trees near habitation. Fig trees in fruit never fail to attract it.

Jynx torquilla Linnaeus : Wryneck

One record only, of a single bird seen on December 29, 1965 near a nullah in the valley.

Dinopium benghalense (Linnaeus) : Lesser Goldenbacked Woodpecker

The only woodpecker seen in Sandur by me. It is fairly common in the valley and on the hills in well wooded situations.

Picoides mahrattensis (Latham) : Yellowfronted Pied Woodpecker

Reported as occurring in Sandur by Krishnan but not seen here by me.

Pitta brachyura (Linnaeus) : Indian Pitta

This splendidly plumaged ground bird is often seen in the thick vegetation lining nullahs. Probably only a winter migrant to Sandur but I have records of the Pitta from Sandur as late as May and even the first week of June.

[Koelz (1947) took four specimens of the Singing Bush Lark *Mirafra javanica* Horsfield from Hospet in March which he described as a new race—*M. j. bangsi*, now synonymised with *M. j. cantillans* Blyth.]

Eremopterix grisea (Scopoli) : Ashycrowned Finch-Lark

This little lark is mainly found in the drier, more open parts of the taluk in pairs or small parties. In January I saw a small flock of reddish larks come down for a drink at one of the nullahs in the valley. On close observation, however, I found that the brick-red coloration was not original but only a coating of red soil probably acquired in the process of a dust bath. One male was obtained in March at Hospet by Koelz (1947).

Ammomanes phoenicurus (Franklin) : Rufoustailed Finch-Lark

Occasionally seen in the same type of biotope as the preceding species. Pairs are seen feeding on the ground in scrub or fallow fields. Koelz (1947) secured a female from Hospet on March 25, 1937, which he placed with the nominate subspecies *A. p. phoenicurus* (Franklin). According to the INDIAN HANDBOOK (Ali & Ripley 1972) this race does not occur in Karnataka at all but is replaced south of c. 15°N. latitude by *A. p. testaceus* Koelz, the type of which came from Salem in Tamil Nadu.

***Alauda gulgula* Franklin : Small Skylark**

Krishnan observed a small skylark in Sandur, which he thinks was this species, singing on quivering wings, high in the air in characteristic fashion.

[A female Dusky Crag Martin *Hirundo concolor* Sykes was taken at Hospet in March (Koelz 1947).]

***Hirundo smithii* Leach : Wiretailed Swallow**

Fairly common in Sandur, always seen near water hawking insects in the air. A trim and neat swallow with long 'wires' in the tail not readily visible in flight but the pure white underparts are suggestive pointers to its identity. A male was taken at Hospet in March (Koelz 1947).

***Hirundo daurica* Linnaeus : Striated Swallow**

Resident and common, in fact the most abundant swallow in Sandur. Its numbers are increased in winter through the arrival of migrant populations.

***Lanius excubitor* Linnaeus : Great Grey Shrike**

Stray individuals only noticed in the eastern plains. This shrike has not been recorded in the valley or on the western plains but it must surely occur in the latter. According to the INDIAN HANDBOOK (Ali & Ripley 1972) this shrike is not recorded in Karnataka south of Belgaum. It is in fact a fairly common bird throughout the Karnataka 'maidan' in suitable biotope (Ghorpade, 1973).

***Lanius vittatus* Valenciennes : Baybacked Shrike**

The commonest shrike in Sandur, frequenting all types of terrain in the valley and plains to the top of the hills.

***Lanius schach* Linnaeus : Rufousbacked Shrike**

Fairly abundant in open country and scrub in the plains and valley, often seen side by side with the preceding species. In most individuals here, the rufous of the rump and lower flanks does not extend further up the back. Koelz (1947) took a male and two females of the race *L. s. caniceps* Blyth at Hospet in March.

***Lanius cristatus* Linnaeus : Brown Shrike**

This shrike is a regular cold weather visitor to Sandur and is found singly in scrub, cultivation and the edges of forest. Duller in plumage than other shrikes, but is itself a very handsome bird.

***Oriolus oriolus* (Linnaeus) : Golden Oriole**

This splendid bird is a familiar sight in Sandur at all elevations in the hills, valley and plains. It affects forest and field alike with a preference

for the shady mango groves. A shy and retiring bird, it keeps to taller and fuller foliated trees as a rule. It appears to be only a winter visitor here.

Oriolus xanthornus (Linnaeus) : Blackheaded Oriole

One record only of a single bird in the company of several golden orioles perched on top of a huge mango tree in the valley.

Dicrurus adsimilis (Bechstein) : Black Drongo

This pugnacious bird is commonly met with almost everywhere in Sandur including on the hills. It often accompanies grazing herds of cattle, using their backs as a vantage point from where it darts after insects disturbed by the animals. Neginhal (1971) noted it near the rest house at Shingtalur.

Dicrurus caerulescens (Linnaeus) : Whitebellied Drongo

Recorded only once from the Sandur valley when a solitary bird with a distinct white belly was seen sitting on a tree in the middle of a field near a tree-and-shrub choked nullah. Apparently a scarce resident in Sandur, but Krishnan found it fairly common at Ramgad on the Ramandrug range of hills. Campbell (1906) found nests of this drongo on the Ramandrug range.

[Krishnan observed the Greyheaded Myna *Sturnus malabaricus* (Gmelin) to be common at Tungabhadra, feeding on ripe banyan figs.]

Sturnus pagodarum (Gmelin) : Brahminy Myna

This attractive myna is a common breeding resident and is frequently seen in all types of habitat, mainly near cultivation and habitation. One bird was seen feeding on flower nectar of a silk-cotton tree, *Bombax ceiba*, in the valley in February. Koelz (1947) took a male at Hospet in March; several were seen on trees surrounding Chilkanhatti tank in February by the author.

Sturnus roseus (Linnaeus) : Rosy Pastor

I have never seen this migrant anywhere in the taluk but Krishnan (1955) writes—'Rosy Pastors arrive in thousands in the Bellary country outside the Sandur hills about September-October. No crop in that area is then ripe, but the birds are probably still to be found there in November when a few early heads of *jowar* may be available to them. By December they appear to have quit. The remarkable thing is that they *never* cross the Sandur hills into the Sandur area where grain is available to them in plenty. On this point I am certain, but having been only an occasional visitor to the Bellary area outside the Sandur hills, I have formed only

rough impressions of the movements of the Rosy Pastors there.' Abdulali (1947) discusses the movements of this bird in India.

***Acridotheres tristis* (Linnaeus): Indian Myna**

One of the commonest birds in Sandur especially about habitation and open country. Being omnivorous it competes with the crows and house sparrows for scraps thrown out of houses. Nests in holes in buildings, old wells and such like. Noted near the rest house at Shingtalur (Neginhal 1971).

***Dendrocitta vagabunda* (Latham): Indian Tree Pie**

This bird is a common resident all over Sandur from the forest-covered hills to village groves and scattered trees in the plains. An attractive avian, one is not quite prepared for its harsh calls completely different from the liquid 'bob-o-link' uttered with body arched and tail tucked under, which helps to locate it in some leafy tree. It has three other types of calls—a raucous 'crrrh', a crow-like 'kak, kak, kak', and another peculiar note emitted with feverish bobs of the head.

***Corvus splendens* Vieillot: House Crow**

In Sandur, this crow is found synonymous with the town and villages but is much less common than the following species especially in open country. Its nests are parasitised by the Koel who for ages has been fooling the seemingly 'intelligent' crow into hatching its eggs and rearing its young. Devours the ripe fruits of fig trees with obvious relish, though clumsy in the act.

***Corvus macrorhynchos* Wagler: Jungle Crow**

Certainly more numerous than the House Crow, inhabiting almost all types of terrain including the hills. When in good plumage it is a coarsely handsome bird with shining black feathers and a strong bill. A useful scavenger of refuse in and around habitation but sometimes destructive to grain and fruit crops. Also feeds on fruit of trees of the genus *Ficus*.

***Tephrodornis pondicerianus* (Gmelin): Lesser Wood Shrike**

Frequently seen singly or in pairs in and outside the valley. Affects the trees and shrubbery along nullah banks and also scattered tree-and-bush country on the foothills. Has a pleasant musical call and hunts insects in the manner of a flycatcher. Koelz (1947) secured a male at Hospet in March 1937.

***Coracina novaehollandiae* (Gmelin): Large Cuckoo-Shrike**

This fine bird has a liking for tall stately trees and is not uncommon in the valley.

Coracina melanoptera (Rüppell) : Blackheaded Cuckoo-Shrike

Seen only once near the tree-choked nullah at Yeshwantnagar in May 1964. Its light grey plumage seemed almost blue in the dark interior of the nullah but the black head was distinct. One male was obtained at Hospet in March (Koelz 1947).

Pericrocotus cinnamomeus (Linnaeus) : Small Minivet

Small groups of four to twelve birds are frequently observed on larger trees hunting insects and constantly uttering feeble musical calls. Fairly common in dry open forest and groves of trees in the valley.

Aegithina tiphia (Linnaeus) : Common Iora

A very common and delightful little resident of the Sandur area. It has a bewitching mellow whistle, surprisingly loud for so small a bird. Affects well wooded open country with groves of large trees and also the forested hills. In breeding plumage the male is a striking golden yellow and black bird, its antics on trees an immense joy to watch. Koelz (1947) took a male in March at Hospet.

Chloropsis cochinchinensis (Gmelin) : Jerdon's Chloropsis

A.M.G. reports this bird as resident and breeding in Sandur but I have not seen it here. Krishnan mentions seeing it along a nullah in the valley.

Pycnonotus jocosus (Linnaeus) : Redwhiskered Bulbul

A somewhat scarce and local resident, keeping to moister and more forested areas, thus being more familiar on the hills.

Pycnonotus cafer (Linnaeus) : Redvented Bulbul

Extremely abundant everywhere and resident. Wild fig trees in fruit invariably attract this species which gorges itself on the delicacy. It is no doubt an important dispersal agent for the Sandal tree *Santalum album*, found all over Sandur. Several of these bulbuls were seen by the author near the tank at Chilkanhatti in February 1968. Koelz (1947) secured a male in March at Hospet.

Pycnonotus xantholaemus (Jerdon) : Yellowthroated Bulbul

C. L. Wilson shot and identified one of this species at Bellary on June 13, 1901 and also noticed some 20 pairs frequenting the rocky hills there. He also took a nest on June 23 the same year and felt that June-July was the breeding season of these bulbuls there (Allen 1908). This is again quoted by Whistler and Kinnear (1932b) in their report on the Eastern Ghats bird survey. Whistler (*in* Ali 1942) refers to the Eastern Ghats survey report and comments further—'this bulbul . . . is apparently much overlooked because of its skulking habits and the fact that the region it inhabits has not received much attention from ornithologists,

.... a specimen was collected at Ramandrug on 6 May 1919 (?) by Mr. E. H. Pooler' Ali and Ripley (1971) include only Chitaldrug (Chitradurga) and Bangalore districts as within the range of this uncommon bulbul, possibly overlooking the above reports from Bellary district. I have not seen this rare bulbul in Sandur and Pooler's specimen from Ramandrug in the hills is the only record of the bird from the taluk.

***Pycnonotus luteolus* (Lesson) : Whitebrowed Bulbul**

Another familiar bulbul in Sandur but not as abundant as the Redvented. It prefers open country and cultivation but also affects the tree-lined nullahs in the valley. Possesses a loud call which is a good indication of its presence on walks.

***Pellorneum ruficeps* Swainson : Spotted Babbler**

One record only, of a pair hopping about on the bed of a nullah littered with fallen dry leaves near Yeshwantnagar in the western plain near the foothills of the southern range, on May 1, 1963. Ali and Ripley (1971) state that this babbler is not known from the Deccan plateau so this record is of considerable interest. The Sandur hills with their densely forested slopes provide an ideal habitat for this babbler.

***Dumetia hyperythra* (Franklin) : Whitethroated Babbler**

Observed in small flocks in scrub near Yeshwantnagar. They keep to small bushes, hopping about in them and uttering sharp chirpy calls.

***Chrysomma sinense* (Gmelin) : Yelloweyed Babbler**

A compact babbler with a loosely held long tail and striking yellow eyes. Keeps to the interior of bushes and thickets along nullahs and is very shy and evasive, thus being difficult to observe. Koelz (1947) shot a male of this species at Hospet in March.

***Turdoides caudatus* (Dumont) : Longtailed Streaked Babbler**

The 'Common Babbler' of many authors, it is decidedly uncommon in Sandur, keeping to the drier, scrub-covered areas of the western plains. Here it lives in small flocks which are seen following each other across the scrub. I prefer to call this the 'Longtailed Streaked Babbler' as the bird is hardly common throughout its range⁷. A male was obtained on March 25 at Hospet (Koelz 1947).

⁷ The word 'common' is best restricted to an indication of the abundance of a particular bird in a given area rather than as an English name designating a species. The latter procedure usually results in ambiguity especially among amateurs when the common name is not accompanied by the scientific name of the species. Thus the term 'Common Babbler' in Sandur may apply either to *T. striatus* or to *T. malcolmi* depending on whether the reference is in respect of the hills or the plains respectively. If there is to be a standardisation of English names of Indian species (not for subspecies too, please, as in the INDIAN HANDBOOK), I strongly suggest elimination of the term 'common' in favour of a more descriptive word.

Turdoides malcolmi (Sykes) : Large Grey Babbler

Very common in parties of 3-7 birds about cultivation, scrub, vegetation lining nullahs and roads, and edges of forest. Less common than the following species in the forested areas where it is rare. Frequently seen in company with the preceding species in scrub jungle. Moves about very stiffly on the ground and is very noisy and demonstrative if disturbed, the rabble taking refuge in nearby trees and keeping up a constant nasal 'goinya, goinya, goinya' which gives them their local name. Two juveniles were taken at Hospet in March by Koelz (1947).

Turdoides striatus (Dumont) : Jungle Babbler

Possibly the commonest babbler in Sandur as a whole, particularly on the forested hills where it alone rules the roost so to speak as far as babblers are concerned. Moves about in 'sisterhoods' of 6-8 individuals, feeding mostly on the ground. On the slightest alarm, the whole flock flies into the nearest tree and sets up a terrible squeaking din, gesticulating with loosely held tail and flicking wings drooping at the sides.

Turdoides affinis (Jerdon) : Whiteheaded Babbler

Somewhat similar to the preceding species in size, shape, coloration and habits but easily separated on account of its creamy-white head, dark brown breast and more musical calls. Somewhat uncommon and noted only around Yeshwantnagar in the western plains. Ali and Ripley (1971) state that this babbler is 'absent or scarce in Mysore east of the Western Ghats.' I may mention here that this babbler also occurs fairly commonly around Bangalore.

Muscicapa latirostris Raffles : Brown Flycatcher

An uncommon resident in Sandur, usually seen hunting insects in the seclusion of the numerous shady mango orchards in and outside the valley.

Muscicapa parva Bechstein : Redbreasted Flycatcher

A regular and plentiful winter visitor to the Sandur area. Each bird occupies a distinct 'territory' on arrival and is found day after day in the same stretch of garden, nullah-bank vegetation or tree-grove. I have never seen the redbreasted male either here or at Bangalore (where it is also a common migrant). It has a characteristic habit of jerking the white marked black tail upwards and at the same time uttering a curious creaky chatter.

Muscicapa superciliaris Jerdon : Whitebrowed Blue Flycatcher

One record of a single bird seen twice on the same day (April 30, 1963) in the vicinity of an overgrown nullah near Yeshwantnagar.

According to my notebook I do not seem to have noticed the white supercilium (if there was one) but the broken blue pectoral band on each side of the breast was definitely observed. A single male collected at Namadachilume (Tumkur district) in southeastern Karnataka on January 2, 1940, by Sálím Ali (1942) is the southernmost and only record of this flycatcher from Karnataka. My record is the second report of this bird from Karnataka and suggests that this flycatcher is possibly an erratic winter visitor here in favourable biotope.

Muscicapa tickelliae (Blyth) : Tickell's Blue Flycatcher

A common resident all over Sandur particularly in nullah-bank vegetation and well-wooded country. One of the prettiest of the peninsular flycatchers, it delights in perching on roots jutting out of nullah banks and launches aerial sallies after insect prey.

Muscicapa thalassina Swainson : Verditer Flycatcher

This brilliant blue flycatcher was seen only once at Shivpur in February 1968 when it flew out of a 'bakul' (*Mimusops elengi*) tree on to an electric wire where it sat for some time, quivering its tail, before dashing back into the tree's interior.

Culicicapa ceylonensis (Swainson) : Greyheaded Flycatcher

One record only, of a single bird frequenting a shrub-lined nullah near Yeshwantnagar on October 3, 1963. Ali and Ripley (1972) state it is not found south of the Krishna river except on the Western Ghats and the Ceylon hills. I have also seen this flycatcher in winter near Yelburga (Raichur district) and it seems to occur further south (in winter only ?) than so far recorded.

Rhipidura albogularis (Lesson) : Whitespotted Fantail Flycatcher

This delightful flycatcher is met with fairly frequently in groves of trees in the valley, along nullah-bank vegetation and edges of forest, where it flits about gracefully, displaying its tail and picking up insects. A breeding resident in Sandur, also occurs on the western plain especially near Yeshwantnagar. Koelz (1947) took a female on March 25 at Hospet.

Terpsiphone paradisi (Linnaeus) : Paradise Flycatcher

A graceful flycatcher, it is resident and fairly common in Sandur. Mango orchards and shrub-laden nullahs are its favourite haunts. Very elegant in flight, its long tail feathers (in the male) floating behind as it wends its way through the dark canopy of trees.

Prinia spp. : Longtail Warblers

Parties of longtail warblers numbering from three to fifteen are frequently seen flying from bush to tree-top, in long grass, shrubs bordering

cultivation and such like but are very difficult to place. They constantly utter feeble calls to each other while flitting about in search of food. These birds are difficult to identify in the field with certainty but I think *Prinia hodgsoni* Blyth and *P. subflava* (Gmelin) occur most commonly in Sandur.

***Prinia socialis* Sykes :** Ashy Longtail Warbler

Fairly common in bushes, nullah-bank vegetation, open forest, scrub and long grass. An attractive little warbler especially when in breeding plumage. Koelz (1947) took a male at Hospet in March ; Neginhal (1971) saw them in bushes on an island in the Tungabhadra in February.

***Orthotomus sutorius* (Pennant) :** Tailor Bird

An exceedingly common resident, principally found scrummaging in bushes and on trees in open country as well as along nullahs. Tame and confiding, it has a remarkably loud call.

***Acrocephalus dumetorum* Blyth :** Blyth's Reed Warbler

A common winter visitor to Sandur, found hopping about in shrubbery along nullahs or tanks, generally near water. An unobtrusive warbler with a distinct pale supercilium.

***Phylloscopus inornatus* (Blyth) :** Yellowbrowed Leaf Warbler

Noted only once in the Palace garden hunting insects on a fig tree. A distinct yellow supercilium and two wing bars suggested its identity. Probably winters here in small numbers.

***Copsychus saularis* (Linnaeus) :** Magpie-Robin

A fine songster common around habitation, gardens and orchards. Also in cultivation interspersed with trees and along nullahs. Partial to groves of large trees but also in scrub.

***Phoenicurus ochruros* (S. G. Gmelin) :** Black Redstart

A fairly common winter visitor, frequenting the Palace garden, orchards, cultivation and tree-lined nullahs. A beautifully coloured bird with the habit of shivering its tail constantly.

***Saxicola torquata* (Linnaeus) :** Stone Chat

Evidently a rare winter straggler to Sandur, single birds seen occasionally in the valley in cultivation and scrub.

***Saxicola caprata* (Linnaeus) :** Pied Bush Chat

Common and abundant in Sandur in all situations, often perched on top of a thorny bush or on telegraph wires, flicking its tail regularly. The resident race is probably *S. c. burmanica* Stuart Baker but I have one

sight record of a single individual with white extending up to the breast which seemed to belong to the migrant subspecies *S. c. bicolor* Sykes. I saw this species on the banks of the Tungabhadra near Anaigudi in February. Koelz (1947) took a male at Hospet in March.

Saxicoloides fulicata (Linnaeus) : Indian Robin

One of the commonest birds in Sandur, extremely abundant everywhere but prefers the neighbourhood of cultivation and scrub interspersed with rocky areas. After a cloudburst it is one of the first feathered creatures to hop down from shelter and burst into song. Keeps its tail cocked up at an acute angle showing the chestnut under-tail coverts. Neginhal (1971) saw it near the rest house at Shingtalur ; Koelz (1947) collected a male at Hospet in March.

Zoothera citrina (Latham) : Orangeheaded Ground Thrush

This interesting thrush is rarely seen, being extremely elusive and seldom venturing out from concealment under some overgrown bushes flanking a nullah. Rummages about among dry littered leaves on stony nullah beds for insects and fallen fruit.

Parus major Linnaeus : Grey Tit

One record only, of a single bird in company with some redwhiskered bulbuls in moist forest at the edge of Thayammankolla on the Raman-drug range in August 1972.

Anthus hodgsoni Richmond : Hodgson's Tree Pipit

A small party of these migrants were observed for several days affecting the Palace garden and the tamarind trees on the grassy banks of Shivpur tank.

Anthus novaeseelandiae Gmelin : Paddyfield Pipit

A common resident in Sandur in the open areas, grassland and cultivation. Gregarious, always found in loosely scattered flocks searching for food on the ground. Koelz (1947) took a female on March 24 at Hospet.

Motacilla caspica (Gmelin) : Grey Wagtail

A few individuals of this species winter at the tanks in the taluk. One or two birds sometimes enter the Palace garden.

Motacilla alba Linnaeus : White Wagtail

This wagtail is found about the tanks at Shivpur and Bandri in the winter in small numbers, walking about on the edges and wagging the tail ceaselessly.

Motacilla maderaspatensis Gmelin : Large Pied Wagtail

Not uncommon along the Narihalla, various tanks and around cultivation in the valley and plains. I saw one at Anaigudi on the banks of the Tungabhadra in February 1968.

Dicaeum agile (Tickell) : Thickbilled Flowerpecker

Not uncommon in well-wooded country especially along vegetation lining banks of the numerous nullahs. I located a nest of this species with two young on a tree with sparse reddish brown leaves beside a nullah near Yeshwantnagar in April 1963. This flowerpecker is an important dispersal agent for the plant parasites *Loranthus* and *Viscum*.

[Tickell's Flowerpecker *Dicaeum erythrorhynchos* (Latham) was obtained at Hospet in March by Koelz (1947). Not recorded so far from within Sandur limits, but it must surely occur here.]

Nectarinia zeylonica (Linnaeus) : Purplerumped Sunbird

A very common resident, found plentifully wherever flowering trees or shrubs are present. This is where the lantana bush comes as a revelation, sunbirds being very fond of its nectar. Also in gardens about habitation not unduly disturbed by the presence of humans. Koelz (1947) secured a male in March at Hospet.

Nectarinia asiatica (Latham) : Purple Sunbird

A shimmering sunbird, superbly plumaged, with a long curved bill which it inserts into flowers to sip nectar. Associates in small groups of 4-6 birds at times and may be found along with the preceding species in the country. The immature male is like the female but with a dark line running vertically down the centre in front from chin to vent. I have seen the glorious male bird chasing away large carpenter bees (*Xylocopa* sp.) visiting the same flowering tree with audible snaps of the bill. Resident and common in Sandur.

Zosterops palpebrosa (Temminck) : Oriental White-eye

Another well distributed bird in Sandur. Completely arboreal, it keeps in parties of 5-20 birds which restlessly hunt insects in densely foliated trees or bushes in light forest, orchards, gardens and the like. Constantly utter a feeble chirpy call while feeding.

Passer domesticus (Linnaeus) : House Sparrow

Extremely abundant in the town and villages, a constant hanger-on of man. Only found in and about habitation or cultivation near villages. When the adjacent fields are in grain, large hordes of sparrows will visit them, causing considerable damage. I saw these on the banks of the Tungabhadra near Anaigudi.

Petronia xanthocollis (Burton) : Yellowthroated Sparrow

A locally distributed but common resident. I found this sparrow in great numbers affecting the central valley. From the tree and shrub bordered nullahs they would fly onto adjacent fields to feed on ripening earheads of jowar and bajra. Also ventures into the Palace garden. One bird was seen feeding on the nectar of silk-cotton (*Bombax ceiba*) flowers in the valley in February.

Ploceus philippinus (Linnaeus) : Baya Weaver

Fairly common resident, breeding during June-August, building its wonderful nests on trees overhanging nullahs, wells, ponds or tanks. Does some damage to grain crops, especially rice and jowar.

Lonchura malabarica (Linnaeus) : Whitethroated Munia

Fairly common about cultivation, dry open scrub and forest edges usually in small to large flocks. Feeds on standing grain crops doing appreciable damage.

Lonchura punctulata (Linnaeus) : Spotted Munia

This little munia is seen from time to time in small flocks and family parties about cultivation associated with light forest. Sometimes teams up with whitethroated munias to feed on ripening grain in cultivated areas. Also feeds on a large variety of grass seeds. A common breeding resident in Sandur.

DISCUSSION

The above account includes a total of 166 species recorded from Sandur taluk with an additional 16 species from other parts of Bellary district. In order to get a reasonable idea of the composition and variety of Sandur's bird life, a comparison with areas of similar dimensions and terrain would be ideal. Table 1 provides such areas together with the number of species recorded from each.

TABLE 1

SPECIES RECORDED FROM AREAS OF COMPARABLE SIZE AND TERRAIN TO SANDUR

Area	Species recorded	Reference
MADHYA PRADESH :		
Saugor (Sagar) and Damoh districts	155*	<i>J. Bombay nat. Hist. Soc.</i> 21 : 87 (1911)
Shore (Bhopal)	294	<i>ibid.</i> , 21 : 153 (1911)
Balaghat	162	<i>ibid.</i> , 21 : 1158 (1911)
Pachmarhi	135	<i>ibid.</i> , 28 : 453 (1922)
Betul	168	<i>ibid.</i> , 41 : 286 (1941), 44 : 471 (1944)
MAHARASHTRA :		
Berar (Akola and Buldana districts)	193	<i>ibid.</i> , 43 : 428 (1942)

* Resident birds only recorded.

Comparing the number of birds so far observed in Sandur (166) with those recorded from the localities mentioned in the table of somewhat similar terrain and size, it seems that in numbers at least, Sandur is in no way inferior. When one considers that Sandur has almost no habitats for water birds and that it is mainly an area of hill forest, open cultivation and dry scrub, a possible total of about 200-250 species would be a conservative estimate for the taluk. Only Bhopal with 294 recorded species is comparatively richer in its avifauna. My own estimate is that the 166 species recorded in this paper make up only about 60-70 % of the possible total of species for this distinctive area. The noticeable omissions from the list are birds attached to inland waters like egrets, herons, storks, waders, snipe, ducks, wagtails and crakes, the paucity of such habitats in the taluk accounting for the absence of these species in Sandur. Other groups such as the diurnal birds of prey, owls, nightjars, cuckoos, warblers, flycatchers and larks must certainly make up a large proportion of the avian population especially in the hills and will need a more careful and exhaustive search.

My observations on the ornithology of Sandur have been necessarily limited, having been carried out in bits and pieces on short trips to the area over a period of ten years. Many areas in the taluk such as the eastern plains were virtually neglected and others were poorly worked for instance the highly interesting hill forests and the western plains. Only the valley was more or less fairly well studied for its avifauna but even here much more field work needs to be carried out in a more systematic manner. An extended residence in the area for a couple of years would be ideal which indicates that 'residents' in the taluk could achieve far more than an 'occasional visitor' like the author. Meanwhile, it is hoped that this preliminary list will serve as a broad indication of the type of bird life existing in the Sandur area and as an aid to future work on the avifauna of the taluk.

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